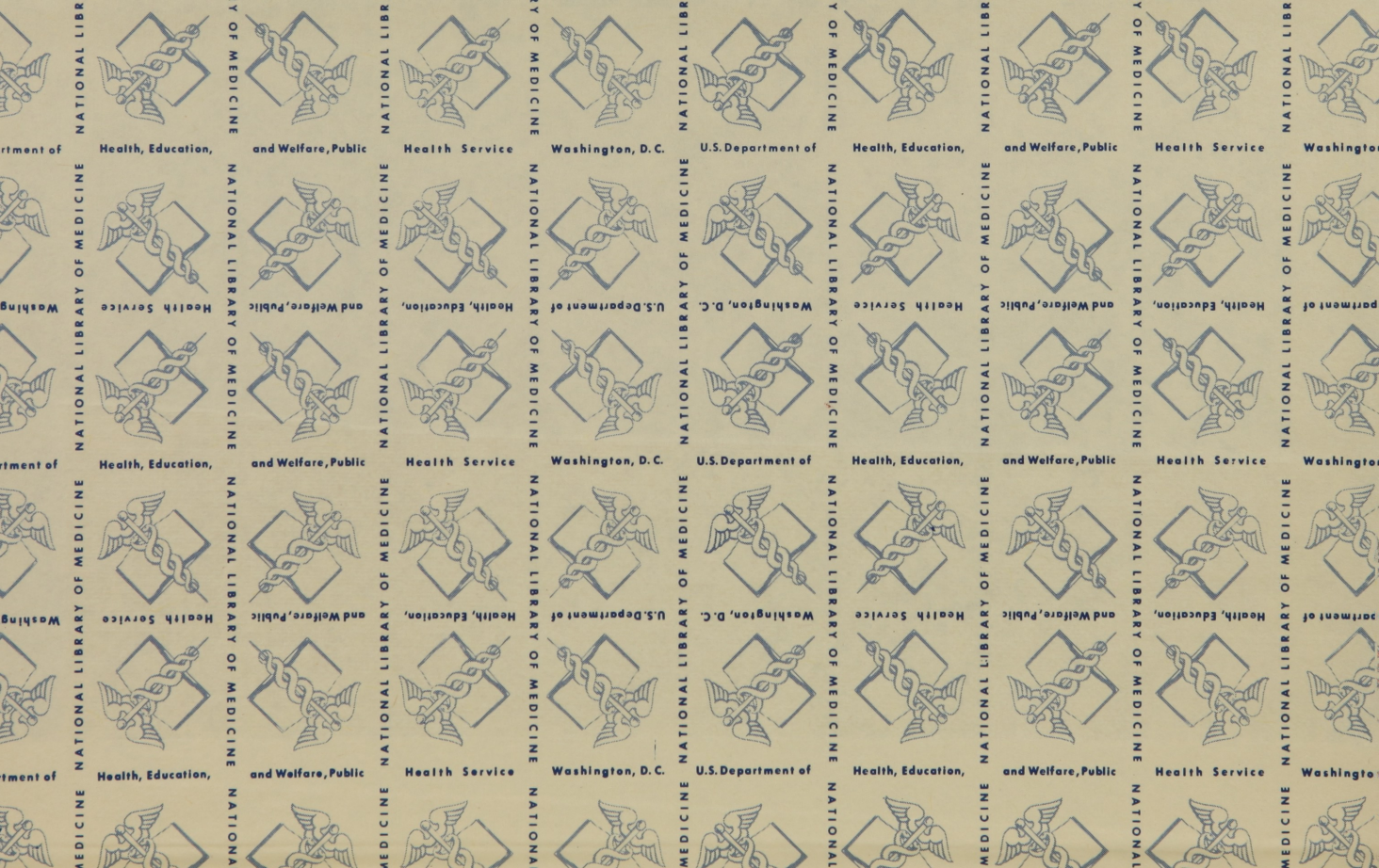
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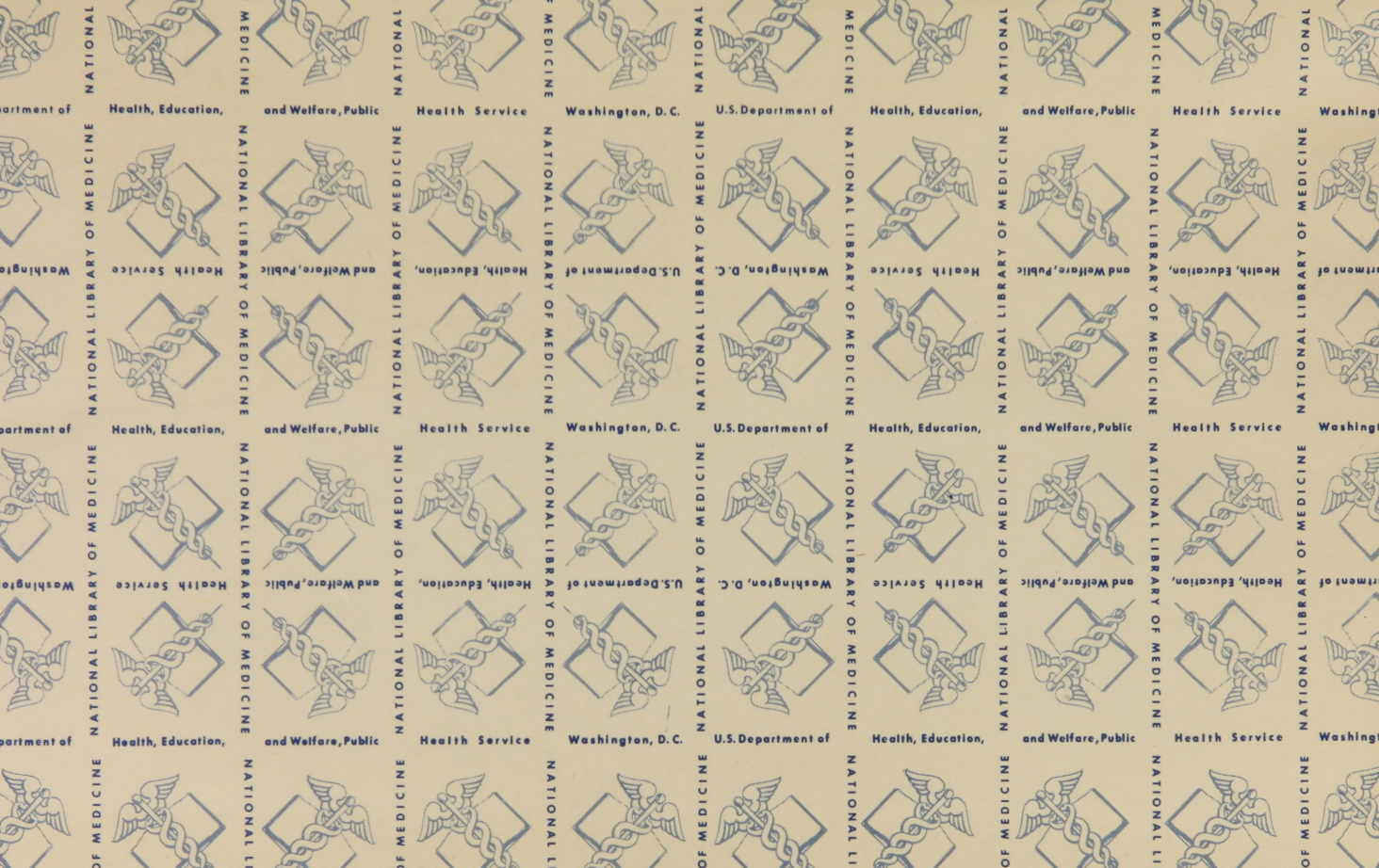
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ESSAY

ON

VACCINAL SYPHILIS,

BY

G. LANOIX, M. D.,

PARIS :

Member of the Legion of Honor; Chief of the "SERVICE DES VACCINATIONS" of the Hospitals of Paris (1865-1870); Physician-in-Chief to the Small-pox Hospital at Bicetre (1870-1871); Member of several Medical Societies, Etc.

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ESSAY ON
VACCINAL SYPHILIS.

EXTRACT FROM DR. LANOIX'S CONFERENCE IN THE AMPHITHEATER OF THE SORBONNE, AT PARIS, ON THE 26th OF JULY, 1869.—Translated from the "LA TRIBUNE MEDICALE."

In my opinion, gentlemen, there are two species of vaccinal syphilis, and I am, I believe, the first to establish this division in a precise manner.

These two varieties are, viz.:

1st. Evoked vaccinal syphilis.

2d. Inoculated vaccinal syphilis.

Each has its distinct characteristics and distinct course, which enables us to establish its different diagnosis.

Evoked or developed vaccinal syphilis:

I have had several opportunities of observing it in hospitals; also cases like the following have been brought to my notice.

An infant, a few weeks or even a few months old, perfectly healthy in appearance at the time of its vaccination, is inoculated either with human or animal vaccine. The eruption takes place with perfect regularity; nothing indicates by the appearance of the pustules that anything irregular will take place; all follows the normal course until the tenth or eleventh day, at which period, instead of coming to a stand and checking its growth, the pustule increases in its development until the twelfth, fourteenth or fifteenth day, when it reaches the size of a 20-centimes or 1-franc piece. Instead of a healthy brown crust, such as that of ordinary vaccine, a greenish crust, of a *sui generis* aspect, and surrounded by a characteristic copper-colored circle, is formed, when this has fallen, there will appear under it a reddish and bloody erosion, hardened at its base, and which, far from healing, grows broader and deeper. This is the outbreak of syphilis; secondary symptoms soon appear, accompanied and followed by all the other symptoms, which leave no doubt as to the diagnosis.

I now ask you, gentlemen, whether this insidious progress may not deceive the most experienced? who is it can detect after the eleventh or twelfth day that, under a pustule of regular appearance, an ulcerating process is going on, developing the yet invisible symptoms of reviving syphilis? I ask you who can point out the precise moment when the action of vaccine ends, and that of syphilis commences? and you surely can see the terrible consequences which may result should lymph be taken at a late period for the purpose of vaccination. The lancet would be charged with a mixture of the two kinds of virus, that of vaccine and that of syphilis; both would be inoculated at the same time. This, in my opinion, is the cause of transmission of syphilis by vaccination; this explains the positive and the negative results (as regards syphilis) obtained by inoculations, when taken from syphilitic subjects, to be transmitted to healthy ones. I believe that at the commencement of the evolution, the vaccinal pustule produces, by a sort of dialysis, vaccine only, however syphilitic the subject on which it develops itself may be; but, no sooner has it spent its own vitality, than it then participates, like all other tissues of the human organism, in the qualities or vices inherent to that organism. It is therefore easy to comprehend that if vaccine is taken from the pustule at its commencement, vaccine only will be transmitted; but a period of transition comes, when the vaccinal pustule has run its course, and the pseudo-chancre appears, the two united at the same point, mingling their secretions in one liquid, which partakes of the properties of vaccine and of syphilis—this mixed secretion, by inoculation, produces vaccinal syphilis, which we shall now examine:

Without going into the numerous and well-known cases of vaccinal syphilis which have been reported by Cerioli, Hubner, Lecocq, Coggïola, Trousseau, Chassaignac, Herard, and Viennois, and the more recent examples which have occurred in the Department of the Lot and Morbihan, whose diagnoses I shall discuss in another place, I only wish to mention those that I have myself witnessed at the Academy of Medicine, Paris.

On the 12th of November, 1868, having called at the St. Louis Hospital, Paris, I learned casually from M. Hardy that on the preceding day he had observed a case of vaccinal syphilis in an adult, who had been vaccinated at the Academy several months previously.

Thinking that this might be a new case of epidemic vaccinal syphilis, I resolved to make personal inquiries; and I was at last enabled to ascertain the precise day on which this person had been vaccinated at the Academy: it was on the 19th of August preceding; on that same day ten children and thirty-three soldiers had been vaccinated.

Continuing my researches, I ascertained the names of the two children from whom the virus had been obtained: their names were Conrad and Rousselot. A few soldiers only had been vaccinated from Rousselet; Conrad, on the contrary, had furnished most of the vaccine used on that day. On the day I made my inquiries, the 13th of November, nearly three months subsequent to the vaccinations, the child Rousselot was in perfect health. As to the other child, it was dead; its death had occurred two days after having supplied his virus at the Academy.

In a few words here is the narrative of its life:

Born of healthy parents and in good health, it was sent from Paris to a village in the Department of the Basses Pyrenees, and confided to the care of a wet-nurse. This woman's loose conduct was well known in the place; under her care the child soon wasted away; its body was covered with ulcers; and after a few months it became so diseased that the mayor of the place wrote to the child's parents, stating that it had caught the disease from its nurse, and that the child, being in danger of its life, had better be taken away at once. The mother immediately started, and found her child even worse than she had expected; it was so emaciated and weak that she expected it to die in her arms; the genital parts and the vicinity of the anus were covered with ulcerations and maculæ. She returned to Paris with her child, and in a few weeks, under good care, the child appeared much better, and she took it to the Academy for vaccination. This was on the 12th of August; on the 19th she took it back; the vaccinal pustules were found to be regularly developed; from these pustules was taken the vaccine for that day's authorized vaccinations; on the 21st the child died of colliquative diarrhœa.

The unfortunate mother felt so convinced that the child had received the contagious malady from its nurse that the first thing she asked me when I called upon her to question her was whether her poor child had given the disease to any one.

Having thus ascertained where the vaccine had come from, I made it my first duty to seek out all those who had been vaccinated. I will not detain you with all the details of this long and painful search for several days through Paris and its suburbs; it will suffice, I think, to say that I succeeded in finding all the subjects of that day's vaccination. I reported to Dr. Depaul my sad discoveries, and he accompanied me to see what I had seen. Of the ten (10) children vaccinated on the 19th of August, two (2) had already died before the 14th of November; the others were all syphilitic.

You may believe, gentlemen, that I did not rely upon my own judgment uncorroborated: I submitted my diagnosis to such masters as Messrs. Bouchut and Ricord, who entirely confirmed it.

I will now, gentlemen, mention some of these observations; they are characteristic:

1. P., nine months old, born of healthy parents, and vaccinated at the Academy on the 19th of August, 1868. Six punctures producing six vaccinal pustules of good appearance, the crusts having formed and fallen, leaving the cicatrices peculiar to vaccine; but immediately after this pathological action had ceased, two of the cicatrices on the left arm reopened and produced sores, on which flat scabs formed and fell off; the sores were renewed, and the crusts formed and fell successively, and did not finally heal until one month and a half. When I saw this child, on the 14th of November, at first sight he appeared quite healthy, but his flesh was soft and flabby and his complexion sallow. I thought that perhaps it might have escaped the terrible contamination, but this was not so. On further examination I found his body covered with a red eruption (eruption roseolique) and small mucous maculæ along the margin of the anus. Eight days after, I again saw the child; in the interval it had been examined by another physician, who did not hesitate to diagnose the case to be one of syphilis and to prescribe a specific treatment. This diagnosis was afterwards confirmed by Messrs. Depaul and Ricord.

2. Emile C., eleven months old, born of healthy parents, who already had two remarkably fine, healthy children, vaccinated on the 19th of August, 1868. Six punctures had produced four

pustules—two on the right arm, and two on the left. *During three weeks everything progressed apparently well;* but at this period, as the parents told me, two of the cicatrices on the right arm and one on the left broke out and soon ulcerated. These ulcers soon grew to the size of a franc piece. When I saw this child he was in a dreadful state—exceedingly emaciated and cachectical; he looked like a little old man. He had three indurated chancres on the arm; the body was covered with a syphilitic eruption, mucous spots behind the ears, crusts on the head, and a general ganglionic engorgement. These poor people were very much distressed, and complained that, in spite of the care which they took of their child, it was getting worse every day and seemed to be dying of some unknown malady. I felt for them, I pitied them, and resolved to have Dr. Ricord's advice. That very evening I took the child to him; here is his diagnosis:

Vaccinal syphilis—indurated chancre (form ulcus elevatum), indolent engorgement of the axillary ganglions; secondary symptoms, roseola, lenticular eruption. (Signed) Ricord.

This child was restored to health after several months' specific treatment.

3. The following case is extremely remarkable. To my mind it shows that vaccine taken from a syphilitic subject and transmitted to a healthy and non-vaccinated one may inoculate syphilis without vaccine, which proves that the two kinds of virus are simply mixed side by side in the pimple:

D., twenty-one months old. This child had already been inoculated three times at the Academy unsuccessfully; it was again brought in on the 19th of August. Three punctures were made on each arm. For the fourth time the vaccine failed, but four weeks after the attempt a red swelling appeared on two of the spots where the punctures had been made. These soon ulcerated, grew larger and a greenish crust formed; the crust still remained when I saw the child in November. It was much emaciated, with a cachectic look, and its body was covered with a vesiculo-papular eruption; the axillary and cervical ganglions engorged. This child died.

Such are some of the facts; the others were all similar. If any one doubts, gentlemen, I wish he had been with me on that sad

pilgrimage through the homes where vaccinal syphilis had left its blighting trail; he would have been convinced.

The two species of vaccinal syphilis have therefore each its different and well defined character.

In the evoked vaccinal syphilis one single case may be produced in a large number of vaccinations effected on the same day. The first thing that takes place *is the transformation in situ of the vaccinal pustule into a pseudo-chancre on from the twelfth to the fifteenth day;* immediately thereafter and in rapid succession all the other symptoms of syphilis develop themselves.

When inquiries are made as to the source of vaccine, the child furnishing it is said to be healthy. But if the investigation is followed up as to the health of the parents, it is found that one or the other has been syphilitic, and sometimes also that the vaccinated child has had syphilitic symptoms at the time of its birth, but which have since disappeared.

In inoculated vaccinal syphilis, on the contrary, when several persons are vaccinated on the same day, all or almost all are affected at the same time. With all or almost all, the vaccine follows its regular course; it may even reach so far as cicatrization, but then one or more of these cicatrices will break out in from the twenty-fifth to the thirtieth day into a pimple or papula, the starting point of an indurated chancre. This specific ulceration heals slowly, and is accompanied by an indolent ganglionic engorgement, and tardily, say in one and a half month later, the secondary symptoms of syphilis appear. Should the source of this unfortunate development be followed up, it is found that, as in the above cases mentioned, the child who supplied the vaccine was evidently syphilitic, while those who were vaccinated were perfectly healthy before the operation and belonged to healthy parents.

For us, gentlemen, who are well convinced of the real danger existing in the use of the Jennerien vaccination, we know of no certain and practical means of avoiding this risk. Everything that has been proposed is uncertain and ineffectual. Animal vaccination is the only resource which gives us the logical and practical solution to the problem so earnestly sought after.

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for account of which see other side.

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DRUGGISTS AND IMPORTERS,

183 BROADWAY,

New York, April 5, 1872.

We would direct the particular attention of the medical profession to the **LANOIX VACCINE, or true Non-Humanized Cow-Pox Virus, propagated by the New Method,** known as Animal Vaccination, introduced into France, and practiced for the past eight years, by GUSTAVE LANOIX, M. D., Member of the Legion of Honor, Chief of the *Service des Vaccinations* of the Hospitals of Paris, etc., etc.

We have obtained the personal co-operation of Dr. Lanoix (from whom we had hitherto imported vaccine virus), in establishing here, on a perminent basis, an institution similar to the one of which he is founder and director in Paris. We are thus prepared to supply a far purer and more active vaccine than any heretofore produced in the United States, and one which causes an eruption with the characteristics described by Jenner and the earlier vaccinators. Dr. Lanoix's institution in Paris has been in operation since 1864 and has served as the model for the kindred establishments in Brussels, Berlin, Vienna, St. Petersburgh Warsaw, and other cities in Europe ; the "new method" which he elaborated and inaugurated being now very generally adopted.

We have placed our vaccine establishment, which has lately been founded by Dr. Lanoix personally, in charge of Dr. Charles F. Guillou, formerly of the United States Navy, a well-known physician of high standing, long practice and noted surgical skill, and who has shared with Dr. Lanoix the labor of putting the establishment into full operation. Physicians may therefore rely upon always obtaining a virus of uniform character—in fact, the identical virus from a recent case of original spontaneous cow-pox discovered in France, kept alive by successive inoculations from heifer to heifer (of which Dr. Lanoix brought over two from Europe), and thus preserved, in all its integrity, in accordance with certain natural laws which Dr. Lanoix, after long research, has been able to experimentally determine.

For the protection of the public and of the profession, and that this vaccine may always be identified, and serve by its efficiency to vindicate the reputation of the "new method," Dr. Lanoix has especially authorized us to call it the "Lanoix Vaccine," which title, we give notice, can be applied only and exclusively to the vaccine propagated according to his method, and emanating from our institution, the only one founded by him in America.

We append a letter from Dr. Lanoix addressed to the Members of the Medical Profession, which has been translated into English, and to which we invite attention.

We will send the Lanoix Vaccine on receipt of price by mail or express to any address, with directions for use.

Ivory slips, 25 cents each.

Capillary tubes, $1.50 each.

We remain, very respectfully, yours,

J. Milhau's Sons,

183 Broadway, New York.

NEW YORK, APRIL 15, 1872.

TO THE MEMBERS OF THE MEDICAL PROFESSION.

GENTLEMEN: I have had the honor to occupy a very conspicuous position in the introduction and propagation of direct animal or *buculine* vaccination into France, and its extension thence into European practice generally.

I feel a professional pride and natural interest in the success and reputation of this new method of prophylaxy, and I have come from France to this country for the purpose of observing by personal inspection how far the manner of its application, as practiced here, is calculated to secure its full beneficial action.

I am deliberately convinced that the future usefulness of all vaccination is involved in the question of direct animal vaccination. This conviction of the importance of the new method, my jealousy for the good name and efficiency of its practice, and my proud interest in the successful results which it has already accomplished, induce me to present to your attention the following remarks.

When I introduced it into Paris in 1864 it was so entirely unknown that many vaccinators (Mr. Bousquet among others) went so far as to deny the possibility of preserving cow-pox in its integrity by successive inoculations from heifer to heifer. This subject has since achieved great progress, though in some quarters it is still a matter of controversy, because it has not proved successful as practiced by some physicians. The fault, however, lies not so much with the new method as with the inexperience of those who attempted to practice it. The question at issue is not the correctness of the principle, but the errors in practice.

It was for the purpose of bringing the new method into proper appreciation in this country, and thereby increase its sphere of usefulness, that I have embraced the opportunity offered by Messrs. J. Milhau's Sons to found in the United States a permanent establishment similar to the one under my direction in France, and on a scale that will enable them to supply the whole continent. These gentlemen have associated with themselves Doctor Charles F. Guillou, formerly surgeon of the United States Navy, to whom they will confide the entire care of the establishment as soon as my presence can be dispensed with. My intercourse with Dr. Guillou has satisfied me of the perfect fitness of their selection. I can bear witness to his integrity, zeal, and rare qualifications for the performance of so laborious and responsible a task as the inoculation, propagation, and collection of the animal vaccine, or true cow-pox, in its highest degree of perfection. The profession may rely implicitly on the intelligent and scrupulous observance, therefore, of all the rules I have inculcated as a guide for the entire process. The necessity of this compliance with the rules is obvious, for errors of practice cause as rapid degeneration in animal as in human vaccine.

One of the necessary conditions for success is that the cow-pox be of recent transmission from a case of original spontaneous cow-pox. Therefore, to guard against any loss of power or properties in the cow-pox, and to put the proposed institution here at the start on an equal footing with the one in Paris, I brought with me on the steamship Washington, the 2d of March last, two calves with the cow-pox. One of these had been vaccinated with virus from a case of spontaneous cow-pox just discovered by Doctor Almagran of Orleans; from this calf the other was inoculated at the proper time, in the presence of Doctor Follet, surgeon of the steamer, during the voyage. The vaccinations practiced on board by Doctor Follet and myself, with virus direct from the calf, proved exceedingly satisfactory. It is this same virus, direct from the calf, and brought here in a living state, which continues to be transmitted from heifer to heifer.

It would be very desirable that animal vaccine should be used in all cases instead of humanized vaccine, since it is an incontrovertible fact that the humanized vaccine has degenerated in many countries. Whether the cause of this deterioration lies in the vaccine itself, or in the manner of preservation, or whether it lies in the performance of vaccination, it undoubtedly exists, and constitutes a terrible source of danger in the presence of constantly recurring epidemics of small-pox at different points.

By strict compliance with the rules which it was my good fortune to determine and establish, a pure animal vaccine virus is obtained which is more active, and forms probably a better safeguard against small-pox, than the humanized vaccine, which has sometimes been remarked to have lost much of its protective power. A very eminent physician of Philadelphia reports that in an orphan asylum under his personal observation, out of eighty children between the ages of two and five years, thirty cases were attacked with small-pox, and twenty proved fatal, although all the eighty had been previously vaccinated with humanized vaccine, and bore the marks of its successful inoculation. Should we continue to incur the risk of such failures by retaining the use of humanized vaccine? To renew and restore the vaccine of the present day is the object we should have in view, and to do this we must resort to the new method known as animal vaccination.

In order that the same decadence should not occur in animal vaccine, and that it should produce such results in human vaccinations as we have a right to expect, it is necessary to properly cultivate the true cow-pox, for, like other living productions, it is capable of full development or gradual extinction. By continuing to take advantage of such spontaneous cases of cow-pox as may occur in France, there will be no difficulty in my maintaining with absolute certainty the good quality of the vaccine which the Messrs. Milhau will continue to furnish, and for which they have adopted the distinctive name of "Lanoix Vaccine." The study of this subject has engrossed my attention for the past eight years, and in the course of this long investigation, having made numberless experiments in animal vaccination, I think, with all due deference, that I have earned the right to speak authoritatively as to the results it accomplishes in vaccinating the human species.

Entrusted since 1865 with the direction of the vaccination service (*service vaccinal*) of the hospitals of Paris, and in 1870 with the organization throughout the city of a vast vaccination service, so as to accomplish six thousand vaccinations and revaccinations daily with animal vaccine, I have enjoyed exceptional opportunities for acquiring knowledge on the subject. The arrest of the epidemic then existing was attributed to the number of vaccinations and the good quality of the vaccine. Basing my opinion in part on this great success, I confidently make these statements concerning the new method:

That in first vaccinations, animal vaccine takes like human vaccine, with the difference that the eruption maintains itself longer and resembles the eruptions described by Jenner and the earlier vaccinators. Moreover it will take where the humanized vaccine has signally failed, examples of which are given in my treatises. In Philadelphia I obtained a most satisfactory result with the virus transmitted from one of the calves I brought from France, in the case of an infant who had been ineffectually vaccinated nineteen times; and, beyond doubt, not only carefully, but with the best obtainable vaccine.

That in revaccinations, in persons between twenty and thirty years of age, who had been vaccinated but once (in infancy), it took well in forty per cent. of the number, when the best humanized vaccine was succeeding in thirty only, showing a difference in favor of the new method of thirty three and one-third per cent. over the humanized vaccine.

The superiority of the new method is equally manifest where much larger percentages of successful revaccinations between those ages have been reported. The larger the numbers the more we are led to question the efficiency of the humanized virus used in the first vaccinations, and the consequent existing necessity for careful revaccinations becomes all the more apparent.

A knowledge of these facts is of the highest importance to public hygiene, and will, as soon as they are appreciated, lead to the adoption of animal cow-pox for revaccinations.

In fact, the new method of propagation, in which the cow-pox is transmitted by inoculation from heifer to heifer, to maintain a constant and abundant store of true vaccine, is a real progress on the system of the propagation of humanized vaccine on the arms of infants, which, though still of recognized value, cannot meet all the requirements. It is a real progress—

1. Because it precludes the risk of transmitting syphilis with vaccine. In a thesis on the subject (of which I have prepared an English translation, which can be procured from Messrs. Milhau) I have demonstrated that, in the present state of science, it is totally impossible to give any accurate description by which to recognize in the human vaccine, on the eighth and ninth days (the usual days for collecting and transmitting the virus by ordinary vaccination), whether or not it partakes of a syphilitic character. Physicians should take the lymph from the arm before the eighth day, and exercise the necessary care in the performance. For after and even on the eighth day the liability to mistake the true character of the eruption entails a grave responsibility.

2. Because it admits of the production of vaccine in unlimited quantities at short notice and of unimpaired vigor. It is a grand resource to be able to augment at will the supply of vaccine to meet an epidemic of small-pox with its constantly multiplying foci of contagion.

3. Because it yields, when properly practiced, a more active vaccine virus than the vaccine in present use, and gives a greater percentage of success in revaccinations, and probably secures greater immunity from variola.

These reasons justify my absolute faith in the general adoption of the new method.

In conclusion I will describe the forms in which this vaccine can be obtained, with directions for use :

1. *Ivory points or slips.* These have been found to be the most satisfactory mode for preserving the virus and for making vaccinations. Moisten the virus which is at the rounded end with just sufficient water to reduce it to a syrupy consistence. Scarify the skin slightly by making small cross-marks thus  with the point of the lancet, which has been charged with virus by previously using it to mix the water with the virus on the ivory slip. This scarification must be superficial only, for reasons which every physician will comprehend. By wiping both sides of the charged end of the ivory slip on the abraded surface, the virus will be thoroughly introduced.

Quill points have been found objectionable, the fatty matter naturally covering their surface preventing ready adherence of the virus. When dried, the virus thus collected is apt to scale off. On handling or transportation, this risk is increased by the flexibility of the quill and the convexity of the surface exposed to friction. Thus so little may remain on as to be insufficient for use.

Glass plates answer no better than the ivory, while less convenient for use, or to put in vials or envelopes.

Crusts, though still used, particularly in England, present a serious objection in their composition, which consists in a larger proportion of solidified pus than of vaccinal lymph.

2. *Liquid vaccine, in tubes,* if recently collected in accordance with the rules I have indicated, gives satisfactory results; otherwise, they are liable to contain serous fluid destitute of active properties. The filling of the tubes is an art requiring specific knowledge and great dexterity. The tubes should always be used within one month after being filled, the lymph naturally undergoing change or decomposition in course of time. The fullest confidence may be entertained by the profession that no tubes will be issued from Messrs. Milhau's establishment unless perfectly fresh. Many careful practitioners, for the reason that vaccine virus is itself quite dilute, use the liquid virus in the tubes, instead of water, for mixing with the virus on the ivory slip, so as to secure greater certainty of effect. One tube will answer to use with a number of ivory slips when several persons are to be vaccinated at one time. The lancet should invariably be very thoroughly cleansed after each vaccination before proceeding to the next or touching the virus with it.

On the whole, my preference is for the ivory slips, as being quite as certain and permanent, while more convenient and economical, than any one of the other forms.

I trust that the interest felt in this important subject will justify the length of my remarks, and I ask my brethren of the profession to attribute any want of completeness in this communication to its having already exceeded my intended limits.

I have the honor to subscribe myself,

GUSTAVE LANOIX, M. D.,

Rue Clichy, 44,

Paris, France.

During my stay in the U. S., all communications may be addressed to me.

In care of J. MILHAU'S SONS, 183 Broadway, New York

ESSAY

ON

VACCINAL SYPHILIS,

BY

G. LANOIX, M. D.,

PARIS:

Member of the Legion of Honor; Chief of the "SERVICE DES VACCINATIONS" of the Hospitals of Paris (1865–1870); Physician-in-Chief to the Small-pox Hospital at Bicetre (1870–1871); Member of several Medical Societies, Etc.

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NEW YORK.

1872.

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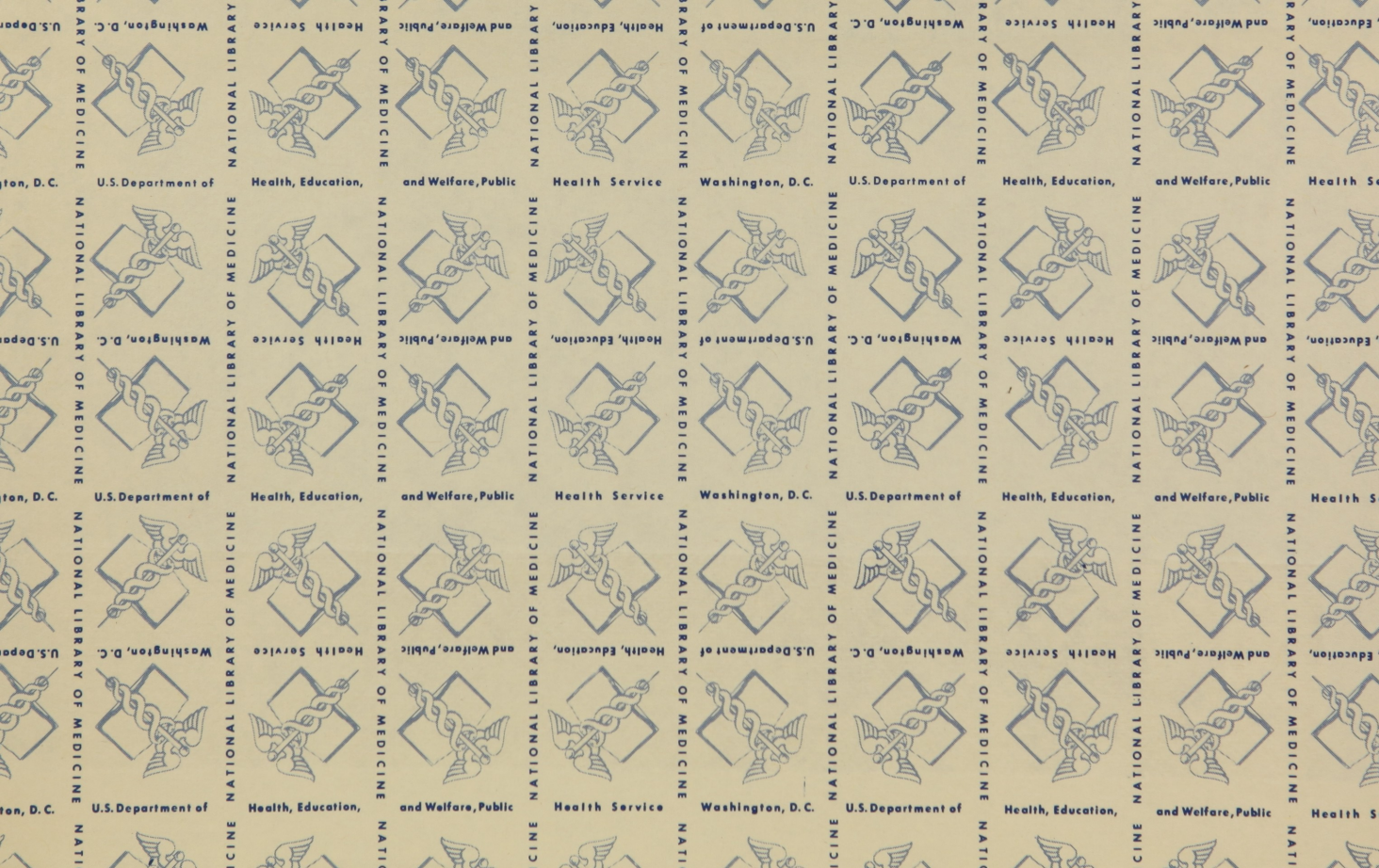
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